

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims:

1-41. (Canceled)

42. (Previously Presented) A method of degrading filter cake in a subterranean formation comprising the steps of:

combining an acid-releasing degradable material with a solvent or a plasticizer to create a coating solution, wherein the acid-releasing degradable material comprises at least one acid-releasing degradable material selected from the group consisting of: poly(orthoester); a lactide, a poly(lactide); a glycolide; a poly(glycolide); a poly(ϵ -caprolactone); a poly(hydroxybutyrate); a substantially water insoluble anhydride; a poly(anhydride); a poly(amino acid); a mixture of one of the above-listed compounds; a copolymer of two or more of the above-listed compounds; and any combination thereof;

coating the coating solution onto a particulate on-the-fly to create coated particulates;

placing the coated particulates into a subterranean formation so that at least a portion of the coated particulates become incorporated in a pack substantially adjacent to a filter cake;

allowing the acid-releasing degradable material to produce acid; and

allowing the acid to contact and degrade a portion of the filter cake.

43. (Previously Presented) The method of claim 42 wherein the filter cake comprises a filter cake on the walls of a well bore or a filter cake on the walls of a fracture.

44. (Previously Presented) The method of claim 42 wherein the particulates are coated with from about 0.1% to about 20% acid-releasing degradable material by weight of the particulates.

45. (Previously Presented) The method of claim 42 wherein acid-releasing degradable material comprises a material that is substantially water insoluble and that degrades over time in an aqueous environment.

46. (Previously Presented) The method of claim 42 wherein the solvent comprises at least one solvent selected from the group consisting of: acetone; propylene carbonate; di(propylene glycol) methyl ether; di(propylene glycol) propyl ether; di(propylene glycol) butyl ether; di(propylene glycol) methyl ether acetate; isopropyl alcohol; chloroform; dichloromethane; trichloromethane; 1,2-dichlorobenzene; tetrahydrofuran; benzene; acetonitrile; dioxane; dimethylformamide; toluene; ethyl acetate; isoamyl alcohol; N-methylpyrrolidone; xylene; dichloroacetic acid; m-cresol; hexafluoroisopropanol; diphenyl ether; acetonitrile; methanol; ethyl benzene; naphthalene; naphtha; and any combination thereof.

47. (Currently Amended) The method of claim 42 wherein the plasticizer comprises at least one plasticizer selected from the group consisting of: polyethylene glycol; polyethylene oxide; oligomeric lactic acid; a citrate ester; a glucose monoester; a partially fatty acid ester; PEG monolaurate; triacetin; ~~poly(ϵ -caprolactone)~~; ~~poly(ϵ -caprolactone)~~; poly(hydroxybutyrate); glycerin-1-benzoate-2,3-dilaurate; glycerin-2-benzoate-1,3-dilaurate; a starch; bis(butyl diethylene glycol)adipate; ethylphthalylethyl glycolate; glycerine diacetate monocaprylate; diacetyl monoacyl glycerol; polypropylene glycol; poly(propylene glycol)dibenzoate, dipropylene glycol dibenzoate; glycerol; ethyl phthalyl ethyl glycolate; poly(ethylene adipate)disterate; di-iso-butyl adipate; and any combination thereof.

48. (Previously Presented) The method of claim 42 wherein the acid-releasing degradable material comprises a poly(orthoester).

49. (Currently Amended) A method of using a portion of a gravel pack to degrade a portion of a filter cake comprising the steps of:

combining an acid-releasing degradable material with a solvent or a plasticizer to create a coating solution; wherein the acid-releasing degradable material comprises at least one acid-releasing degradable material selected from the group consisting of: poly(orthoester); a ~~lactide, a poly(lactide), a glycolide, a poly(glycolide)~~; a poly(ϵ -caprolactone); a poly(hydroxybutyrate); a substantially water insoluble anhydride; a poly(anhydride); a poly(amino acid); a mixture of one of the above-listed compounds; a copolymer of two or more of the above-listed compounds; and any combination thereof;

coating the coating solution onto gravel on-the-fly to create coated gravel;

introducing the coated gravel to a well bore having a filter cake so that at least a portion of the coated gravel is incorporated in a gravel pack substantially adjacent to the filter cake;

allowing the acid-releasing degradable material to produce acid; and,

allowing the acid to contact and degrade a portion of the filter cake.

50. (Previously Presented) The method of claim 49 wherein the gravel pack compositions comprises from about 0.1% to about 20% acid-releasing degradable material by weight of the gravel particles.

51. (Previously Presented) The method of claim 49 wherein the acid-releasing degradable material comprises a material that is substantially water insoluble such that it degrades over time.

52. (Previously Presented) The method of claim 49 wherein the solvent comprises at least one solvent selected from the group consisting of: acetone; propylene carbonate; di(propylene glycol) methyl ether; di(propylene glycol) propyl ether; di(propylene glycol) butyl ether; di(propylene glycol) methyl ether acetate; isopropyl alcohol; chloroform; dichloromethane; trichloromethane; 1,2-dichlorobenzene; tetrahydrofuran; benzene; acetonitrile; dioxane; dimethylformamide; toluene; ethyl acetate; isoamyl alcohol; N-methylpyrrolidone; xylene; dichloroacetic acid; m-cresol; hexafluoroisopropanol; diphenyl ether; acetonitrile; methanol; ethyl benzene; naphthalene; naphtha; and any combination thereof.

53. (Currently Amended) The method of claim 49 wherein the plasticizer comprises at least one plasticizer selected from the group consisting of: polyethylene glycol; polyethylene oxide; oligomeric lactic acid; a citrate ester; a glucose monoester; a partially fatty acid ester; PEG monolaurate; triacetin; poly(ϵ -caprolactone); ~~poly(ϵ -caprolactone)~~; poly(hydroxybutyrate); glycerin-1-benzoate-2,3-dilaurate; glycerin-2-benzoate-1,3-dilaurate; a starch; bis(butyl diethylene glycol)adipate; ethylphthalylethyl glycolate; glycerine diacetate monocaprylate; diacetyl monoacyl glycerol; polypropylene glycol; poly(propylene glycol)dibenzoate, dipropylene glycol dibenzoate; glycerol; ethyl phthalyl ethyl glycolate; poly(ethylene adipate)disterate; di-iso-butyl adipate; and any combination thereof.

54. (Previously Presented) The method of claim 49 wherein the acid-releasing degradable material comprises a poly(orthoester).

55. (Currently Amended) A method of degrading filter cake in a subterranean formation comprising the steps of:

combining an acid-releasing degradable material with a plasticizer to create a coating solution, with the proviso that the plasticizer does not comprise a starch;

coating the coating solution onto a particulate on-the-fly to create coated particulates;

placing the coated particulates into a subterranean formation so that at least a portion of the coated particulates become incorporated in a pack substantially adjacent to a filter cake;

allowing the acid-releasing degradable material to produce acid; and

allowing the acid to contact and degrade a portion of the filter cake.

56. (Previously Presented) The method of claim 55 wherein the filter cake comprises a filter cake on the walls of a well bore or a filter cake on the walls of a fracture.

57. (Previously Presented) The method of claim 55 wherein the particulates are coated with from about 0.1% to about 20% acid-releasing degradable material by weight of the particulates.

58. (Previously Presented) The method of claim 55 wherein acid-releasing degradable material comprises a material that is substantially water insoluble and that degrades over time in an aqueous environment.

59. (Currently Amended) The method of claim 55 wherein the acid-releasing degradable material comprises at least one acid-releasing degradable material selected from the group consisting of: a polyester, a poly(orthoester); a lactide, a poly(lactide); a glycolide; a poly(glycolide); a poly(ϵ -caprolactone); a poly(hydroxybutyrate); a substantially water insoluble anhydride; a poly(anhydride); a poly(amino acid); a mixture of one of the above-listed compounds; a copolymer of two or more of the above-listed compounds; and any combination thereof.

60. (Canceled) The method of claim 55 wherein the plasticizer comprises at least one plasticizer selected from the group consisting of: polyethylene glycol; polyethylene oxide; oligomeric lactic acid; a citrate ester; a glucose monoester; a partially fatty acid ester; PEG monolaurate; triacetin; poly(ϵ -caprolactone); ~~poly(ϵ -caprolactone);~~—poly(hydroxybutyrate);

glycerin-1-benzoate-2,3-dilaurate; glycerin-2-benzoate-1,3-dilaurate; ~~a—starch~~; bis(butyl diethylene glycol)adipate; ethylphthalylethyl glycolate; glycerine diacetate monocaprylate; diacetyl monoacyl glycerol; polypropylene glycol; poly(propylene glycol)dibenzoate, dipropylene glycol dibenzoate; glycerol; ethyl phthalyl ethyl glycolate; poly(ethylene adipate)disterate; di-iso-butyl adipate; and any combination thereof.

61. (Previously Presented) The method of claim 55 wherein the acid-releasing degradable material comprises a poly(orthoester).